



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,713	11/12/2003	William E. Slack	PO7976/MD-03-30	7245

157 7590 07/31/2006

BAYER MATERIAL SCIENCE LLC
100 BAYER ROAD
PITTSBURGH, PA 15205

EXAMINER

SERGEANT, RABON A

ART UNIT PAPER NUMBER

1711

DATE MAILED: 07/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/706,713

Applicant(s)

SLACK, WILLIAM E.

Examiner

Rabon Sergeant

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2006.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) 19-44 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 1711

1. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants' amendment to claims 1 and 10 renders the claims indefinite, because it cannot be determined what is intended by the added proviso. As drafted, the proviso mandates that c)(2) always be present and further requires that c)(2) be used with c)(1) and/or c)(3). This requirement is confusing in view of the Markush language of component c) suggesting that c)(2) need not be used. Also, it is unclear how to interpret the "mixtures thereof" language in view of the proviso. Lastly, in view of applicants' remarks concerning the proviso, it is clear that applicants have interpreted the language to mean other than what it actually recites, namely, that c)(2) must be used.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Slack et al. ('609 or '308) in view of Scholl et al. ('370) and further in view of Slack et al. ('272 or '399 or '746) or Rosthauser et al. ('652) or Markusch et al. ('913).

The primary references disclose the production of allophanate-modified, trimerized MDI having NCO contents that meet those claimed, wherein the MDI is reacted in the presence of a trimerization catalyst, an allophanate catalyst, and an organic compound containing at least one hydroxyl group, such as isomeric butanols or propanols. See abstracts, column 3, lines 48+;

Art Unit: 1711

column 6, lines 29-36; and examples 10, 14, and 15. Furthermore, the primary references disclose quantities of the hydroxyl compound utilized and conversions of urethane groups to allophanate groups that meet those claimed and the use of catalyst poisons to end the reaction at the desired point. See column 3, lines 1-37.

4. As aforementioned, the primary references disclose the use of MDI; however, the references fail to disclose applicant's specifically claimed MDI isomer mixture. Still, the use of MDI isomer mixtures corresponding to those claimed to produce liquid, stable polyisocyanates having the claimed NCO content range was known at the time of invention. Scholl et al. disclose the use of such mixtures to produce isocyanurate containing liquid, stable polyisocyanates. See abstract and columns 1 and 2. Slack et al. ('272, '399, and '746), Rosthauser et al., and Markusch et al. disclose the use of such mixtures to produce allophanate containing liquid, stable polyisocyanates. See abstract and column 5, lines 55+ within Slack et al. ('272). See column 2, lines 32+ within Rosthauser et al. See abstract and column 4, lines 49+ within Markusch et al. See abstracts and columns 2 and 3 within Slack et al. ('399 and '746). Therefore, since these MDI isomer mixtures were known to be useful for producing stable isocyanurate containing polyisocyanates and stable allophanate containing polyisocyanates, and since these resulting compositions and the methods by which they were produced are similar to the MDI-based polyisocyanates and method of the primary references, the position is taken that it would have been *prima facie* obvious to react these MDI isomer mixtures according to the teachings of the primary references, so as to obtain the claimed stable, liquid allophanate-modified, trimerized polyisocyanates.

Art Unit: 1711

5. Applicants' response has been considered; however, clarification is required with respect to applicants' remarks within pages 21 and 22 of the response. With respect to page 21, applicants have argued that it is apparent from examples 18 and 19 that a partially trimerized stable liquid product cannot be obtained from a starting MDI having a content of 2,4'-isomer of less than about 38%; therefore, one could not possibly predict that a starting MDI having a content of 10-40% 2,4'-isomer could form a stable liquid. It is questioned how applicants can make this statement for the claimed contents of the 2,4'-isomer that are in the range of from greater than 38% to 40%. With respect to page 22, applicants have referred to MDI isomer content ranges that do not correspond to those of the independent claims; therefore, clarification is required with respect to why the claimed ranges have not been argued.


6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 1711

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.

R. Sergent
July 24, 2006


RABON SERGENT
PRIMARY EXAMINER